



What's Developing in Frederick

Dealing with In-Town Oil and Gas Development Part 2 | May 2016

As discussed in last month's article, despite relatively low oil prices there has been a recent spike in new oil and gas drilling activity near Frederick neighborhoods. While these new drilling projects can be disruptive to residents' daily lives and take a long time to complete, there are relatively few of them and many of the resulting impacts, such as loud noise, heavy traffic and bad smells, are temporary. However, there are about 500 wells already within town limits which require on-going maintenance and other work that, collectively, happens more frequently than does new well-drilling and can result in similar impacts to residents.

"Anadarko has a large mineral acreage position in and around the Town of Frederick and it is currently in the planning stages of its development process," said Kimberly Mendoza-Cooke, a manager with Anadarko Oil and Gas. "In addition to planning horizontal development, Anadarko is also conducting workover operations on several wells in the Town," continued Mendoza-Cooke regarding both the drilling of new wells and maintenance of existing wells. Because so many wells already exist in Frederick's neighborhoods, the purpose of this month's article is to provide a short primer explaining: 1) how these wells ended up sharing space with neighborhoods; 2) the typical life of an oil and gas well; and 3) some of the more common maintenance and other activities that residents living near these facilities can expect.

Oil and Gas Wells in Your Neighborhood

Many of the oil and gas wells that exist in neighborhoods were drilled before the bulk of Frederick's residential growth of the last 16 years, and have been surrounded by newer neighborhoods that have been built over that time period. While Town staff has not conducted a detailed study of historic oil and gas well drilling in the Frederick area, most wells that now exist in local neighborhoods appear to have been drilled between the early 1970s and the middle 1990s on farm land that was, at that time, mostly outside town limits in rural Weld County. Prior to 1999 only 556 homes were built in Frederick, mostly in the "old town" area; not the surrounding landscape

where most of the oil and gas wells had been drilled. The vast majority of Frederick's neighborhoods were built after 1998 when the town began to expand into the surrounding farm lands. From 1999 through 2015, 3,263 homes were built in Frederick, typically in suburban-style subdivisions that were laid out further and further from old town. For the most part, it was those post-1998 neighborhoods that grew up around previously existing oil and gas facilities and are still living with them today. Neighborhoods that have been built around active oil and gas wells include Eagle Valley, Savannah, Countryside, No Name Creek, No Name Creek West, Casano Ranch, Johnson Farm, Moore Farm, Fox Run, Raspberry Hill, Morningside Estates and Rinn Valley Ranch. Other neighborhoods that are partially built around oil and gas facilities and still growing include Wildflower, Coal Ridge, Maple Ridge, Maplewood, Carriage Hills, Angle View, Prairie Greens and Wyndham Hill. Aerial photographs of Frederick reveal a "Swiss cheese" pattern prevalent in many neighborhoods, with oil and gas wells occupying the holes in the cheese. This pattern of development is the result of Town "setback" regulations that require new homes and other buildings to be built a minimum of 200 feet from existing oil and gas wells. "Uses of assembly," where large groups of people are expected to congregate, such as churches, stadiums and movie theaters are required to be a minimum of 350 feet from existing oil and gas wells.

The Life of an Oil and Gas Well: 101

The life of an oil and gas well—yes, they usually produce both oil and gas—is typically defined by four distinct phases. The first involves the drilling of the well, where the "well-bore"—the deep hole in the ground that will eventually convey the minerals to the surface—is created and lined with steel pipe and concrete. The second phase is called "completion" and involves the hydraulic fracturing, or "fracking" process, whereby explosives are used to create cracks in the earth and a highly pressurized mixture of water, sand and chemicals are used to prop open those



cracks and facilitate the upward flow of oil and natural gas. The third phase is the production phase, during which oil and gas is pumped out of the ground, stored, processed and consumed. Production can last up to 30 years or more. The fourth and final phase is “plugging and abandonment” whereby the well is sealed with concrete and the surrounding land reclaimed.

Maintenance Activities

Maintenance and other work that must be done on existing wells typically happens during the third and fourth phases of the life of a well. Many maintenance activities, including annual lubrication and inspection, will be largely unnoticeable to residents. However, major activities such as “workovers” and “plug and abandons” are relatively common in this area and can take a significant amount of time and effort to perform. Workovers essentially repeat the entire completion phase performed in a new well project, and are typically only undertaken if the pipe, or concrete lining or other equipment in the well has to be removed and replaced due to damage or to increase production. Depending on how much of the existing equipment needs to be replaced, workovers can be completed in as little as two to three days, or could take weeks to perform and can result in significant noise, traffic, odors and other impacts. When wells no longer produce enough oil and/or gas, they are often “plugged and abandoned,” which is industry-speak for decommissioned. During this final phase in the life of a well, all surface equipment is removed from the site, the well-bore is sealed with concrete and the site is regraded and reseeded to match the surrounding landscape. Plugging and abandonment (P&A) wells requires similar equipment to workovers, but can take even more time to complete (approximately 2 weeks) and can also cause significant impacts to neighbors, such as noise, traffic and odor.

Planned Work

As mentioned previously, most oil and gas operators perform annual or more frequent maintenance on their wells that may not even be noticed by many residents. Several operators, including Extraction Oil and Gas and Anadarko Petroleum Corporation, have undertaken more significant maintenance activities in Frederick neighborhoods within the last several months, including workovers and P&A. PDC Energy has upcoming plans for significant work on wells in the following locations:

Well Name: Moore 31-24C
API Number: 05-123-12771
Proposed Work: Plug and Abandon
Location: Moore Farms Neighborhood west of the detention pond at the north corner of the intersection between Mustang Dr. and Triple Crown Dr.

Well Name: Fox U 24-1J
API Number: 05-123-17664
Proposed Work: Plug and Abandon
Location: Moore Farms Neighborhood in Town-owned open space south/southwest of the termination of Welsh Ln. at the culdesac and east of the termination of Pinto St. at its intersection with Wild Horse Way.

Well Name: Walsh 13-24
API Number: 05-123-19609
Proposed Work: Plug and Abandon
Location: Summit View Estates Neighborhood in the pocket park on the northeast corner of Mt. Pawnee Ave. and Mt. Navajo St.

Well Name: Walsh 23-24
API Number: 05-123-20584
Proposed Work: Workover
Location: Town-owned open space west of Milavec Lake, east of Summit View Estates Neighborhood and north of (and adjacent to) Godding Hollow Blvd.

For More Information

The Town of Frederick cannot regulate maintenance activities such as workovers or plug and abandonment because the Colorado Oil and Gas Conservation Commission regulates these activities. For questions or complaints regarding any oil and gas activities, please use the following contact information. Residents and business owners may also contact the COGCC directly using the “complaint line” at 888-235-1101 or main phone line at 303-894-2100. More information is available on the COGCC website at www.cogcc.state.co.us. For non-emergency concerns related to potential fire hazards, gas leaks or chemical spills, please contact the Frederick-Firestone Fire Protection District (303-833-2742), COGCC, well operator and/or local government designee (720-382-5651). Well sites should be clearly marked with the name and telephone number of the operating company.

Report any activities you observe including trespassing and vandalism to the Frederick Police Department (720-

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652-4222), Oil and Gas Conservation Commission, or the well operator. If you have concerns related to the location, construction or operation of an oil and/or gas well, contact Utility Locate (Colorado 811 or 1-800-922-1987), the well operator, local government designee (720-382-5651), or a COGCC representative. For information on new and existing wells, please refer to the interactive map on the Town's Development Center webpage. Simply open the map and click on either the "oil well" icon (for existing wells), or the "bulldozer" icon (for drilling and other development projects).



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